

Atty. Docket No. ACR0037-US
Serial No: 09/893,438

Amendments to the Claims

Please amend the claims as follows:

1. (Original) A multimode filter in an optical storage device for filtering an error signal and extracting a frequency signal, said multimode filter comprising:
a CLV mode filter for filtering said error signal and extracting a narrow bandwidth signal;
a CAV mode filter for filtering said error signal and extracting a wide bandwidth signal;
and
a switch for selection of the filter between CLV and CAV mode filter.
2. (Currently Amended) The multimode filter as claimed in claim 1, wherein said CAV mode filter ~~comprising~~comprises:
a high pass filter for filtering said error signal and generating an intermediate signal; and
a low pass filter that connects with said high pass filter for receiving and filtering said intermediate signal from the high pass filter.
3. (Original) The multimode filter as claimed in claim 2, wherein said high pass filter has a cutoff frequency of multiple times of 22.05 KHz.
4. (Original) The multimode filter as claimed in claim 2, wherein said low pass filter has a cutoff frequency of multiple times of 55 KHz.
5. (Original) The multimode filter as claimed in claim 1, wherein said frequency signal has a center frequency of multiple times of 22.05 KHz.
6. (Currently Amended) The multimode filter as claimed in claim 1, wherein said error signal is comprises a tracking error signal.

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7. (Currently Amended) The multimode filter as claimed in claim 1, wherein said optical storage device is selected from the group consisting of CD-R, CD-RW, DVD-R, DVD-RW, DVD+RW, and DVD-RAM.

8. (Original) An optical storage device having a multimode filter for filtering an error signal and extracting a frequency signal, said multimode filter comprising:

a CLV mode filter for filtering said error signal and extracting a narrow bandwidth signal;

a CAV mode filter for filtering said error signal and extracting a wide bandwidth signal;
and

a switch for selection of the filter between CLV and CAV mode filter.

9. (Currently Amended) The ~~multimode filter~~optical storage device as claimed in claim 8, wherein said CAV mode filter ~~comprising~~comprises:

a high pass filter for filtering said error signal and generating an intermediate signal; and

a low pass filter that connects with said high pass filter for receiving and filtering said intermediate signal from the high pass filter.

10. (Currently Amended) The ~~multimode filter~~optical storage device as claimed in claim 9, wherein said high pass filter has a cutoff frequency of multiple times of 22.05 KHz.

11. (Currently Amended) The ~~multimode filter~~optical storage device as claimed in claim 9, wherein said low pass filter has a cutoff frequency of multiple times of 55 KHz.

12. (Currently Amended) The ~~multimode filter~~optical storage device as claimed in claim 8, wherein said frequency signal has a center frequency of multiple times of 22.05 KHz.

13. (Currently Amended) The ~~multimode filter~~optical storage device as claimed in claim 8, wherein said error signal is comprises a tracking error signal.

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14. (Currently Amended) The ~~multimode filter~~optical storage device as claimed in claim 8, wherein said optical storage device is selected from the group consisting of CD-R, CD-RW, DVD-R, DVD-RW, DVD+RW, and DVD-RAM.

15. (Currently Amended) A multimode filtering method for filtering an error signal of an optical storage device, said multimode filtering method comprising:
inputting an error signal to a multimode filter comprising a CLV and CAV mode filter;
setting a frequency domain of said multimode filter in accordance with a ~~selection of the~~
recording mode of said optical storage device; and
filtering said error signal and extracting a frequency signal.

16. (Currently Amended) The multimode filtering method as claimed in claim 15, wherein when said multimode filter ~~comprises is in~~ a ~~CLV and CAV mode filter,~~ said method further comprises:
high pass filtering said error signal and generating an intermediate signal; and
low pass filtering said intermediate signal.

17. (Currently Amended) The multimode filtering method as claimed in claim ~~15~~16, wherein said CLV mode filter has a center frequency of multiple times of 22.05 KHz, and the CAV mode filter has cutoff frequencies of multiple times of 22.05 KHz and 55 KHz.

18. (Original) The multimode filtering method as claimed in claim 15, wherein said frequency signal has a center frequency of multiple times of 22.05 KHz.

19. (Currently Amended) The multimode filtering method as claimed in claim 15, wherein said error signal ~~is~~comprises a tracking error signal.

20. (Currently Amended) The multimode ~~filter~~filtering method as claimed in claim 15, wherein said optical storage device is selected from the group consisting of CD-R, CD-RW, DVD-R, DVD-RW, DVD+RW, and DVD-RAM.